**Results**: Initially, 65% of subjects received warfarin, but only 49% were on warfarin at 12 months. Hypertension, CHF, valvular heart disease and a rate control strategy were predictors of initial warfarin use; age<55 years, female gender, and history of coronary artery or ulcer disease were negative predictors. Predictors of warfarin use at 12 months are shown in Table 1. Hypertension, ulcer disease, gender, and physician specialty were not predictive. The strongest predictor of warfarin use at 12 months was recurrence of AF.
**Conclusions**: Predictors of warfarin use in AF patients include stroke risk factors and potential warfarin contraindications. In addition, AF recurrence is a potent predictor for warfarin use 12 months after initial diagnosis.

**Table 1. Predictors of warfarin use at 12 months**

| Variable | Odds ratio (95% CI) | P value |
|---|---|---|
| AF recurrence | 2.27 (1.51-3.42) | 0.0001 |
| Prior stroke/TIA | 2.09 (1.15-3.79) | 0.02 |
| CHF | 1.89 (1.25-2.87) | 0.003 |
| Valvular disease | 1.78 (1.16-2.66) | 0.008 |
| Age <55 | 0.49 (0.33-0.74) | 0.0008 |

## 1066-106 Comparison of Transesophageal Echocardiography-Detected Thromboembolic Risk Markers in Patients With Chronic Atrial Fibrillation and Atrial Tachycardia According to the SPAF Clinical Risk Stratification: A Prospective Study

Nadia Benyounes, Valérie Rozenberg, Lydia Djaouti, Charles Smadja, Mohammed Khirredine, Ariel Cohen, *Saint Antoine University Hospital and Medical School, Paris.*

The thromboembolic (TE) risk of atrial flutter and tachycardias (AFT) has been reported as lower than atrial fibrillation (AF). Current guidelines suggest the need for a similar anticoagulant strategy in both groups. This attitude could be balanced by a risk stratification using SPAF clinical criteria and TE echocardiographic markers.
**Objective** : We sought to compare the frequency of TE risk markers in patients (Pts) with chronic AF and AFT according to the SPAF clinical criteria for TE risk stratification.
**Methods** : As part of an ongoing prospective study, we evaluated 212 Pts in chronic AF and 77 Pts in AFT using transthoracic and transesophageal echocardiography (TEE). Pts were divided into high (n=113 and 43, respectively) and moderate/ low (n=99 and 34, respectively) SPAF clinical risk groups. The following parameters were evaluated : left atrial (LA) and LA appendage (LAA) areas, spontaneous echo contrast (SEC), LAA end diastolic emptying velocity (Vel), LA thrombus (Thr) and thoracic aorta atheroma (TAA).
**Results** : The main results are summarized in the table

| | Chronic AF High risk (n=113) | Chronic AF Moderate/ low risk (n=99) | AFT High risk (n=43) | AFT Moderate/ low risk (n=34) |
|---|---|---|---|---|
| Mean age (years) | 75 ± 11 | 63.1 ± 11.5 | 70.9 ± 14.2 | 63.7 ± 12.9 |
| LA area ($cm^2$) | 24.7 ± 6.3 | 24.3 ± 6.0 | 23.7 ± 7.2 | 22.3 ± 6.9 |
| LAA area ($cm^2$) | 5.4 ± 2.3 | 5.9 ± 2.6 | 5.8 ± 2.6 | 5.4 ± 2.4 |
| LAA Vel ≤25 cm/s (n,%) | 55 (50.9)* | 32 (34.7) | 9 (21.9) | 8 (25.0) |
| LA SEC (n,%) | 75 (73.5)* | 60 (63.8) | 18 (45.8) | 12 (44.4) |
| LAA Thr (n,%) | 6 (5.3) | 1 (1.0) | 2 (4.6) | 0 |
| TAA ≥ 4 mm (n,%) | 18 (17.3) | 10 (10.4) | 10 (23.8) | 4 (13.3) |

*p< 0.05, high risk AF vs high risk AFT ; ** p< 0.05, moderate/low AF vs moderate/low risk AFT.
**Conclusion** : LA TE risk markers are more frequent in high risk Pts with AF. However, LA and LAA dilatation and TAA are equally frequent in both high risk Pts. AFT should be stratified using the SPAF criteria, similarly to AF, to help the accurate anticoagulant strategy.

## 1066-119 A Risk Profile for Stroke or Death in Atrial Fibrillation: The Framingham Heart Study

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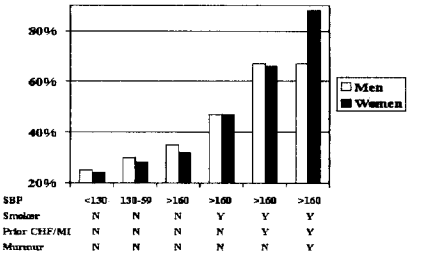
**BACKGROUND**: Individuals with atrial fibrillation (AF) are at increased risk of both stroke and death. Risk factors for stroke in AF have been studied, but mainly in subjects enrolled in randomized trials. We developed a clinical risk profile, and examined whether it could stratify risk among individuals with AF in the community.
**METHODS**: We studied 870 subjects (mean age 74, range 55 to 94 years, 48% women) from the original and offspring cohorts of the Framingham Heart Study who developed AF after 1960. Stepwise Cox proportional hazards models were used to examine clinical predictors (obtained from history, physical exam, or ECG) of stroke or death during 5 years of follow up. Subjects who had a stroke or died within 30 days of AF diagnosis were excluded.
**RESULTS**: The 5-year event rate was 49%. The following predictors were significant in multivariable models: age, systolic blood pressure, smoking, prior myocardial infarction or heart failure, and heart murmur. Men in the lowest decile of predicted risk had a 5-year event rate of 9.4%, while those in the highest decile had an event rate of 83.9%. The corresponding values for women were 30.4% and 93.5%. Sex-specific predicted event rates for a representative 70 year old are shown (Figure).
**CONCLUSION**: Using a risk prediction model, it is possible to identify subjects with AF who are at particularly high or low risk of stroke or death.




## 1066-120 Embolic Event Rates After Direct Current Cardioversion in Patients With Atrial Fibrillation and Ineffective Anticoagulation: Results of the Ludwigshafen Observational Atrial Fibrillation Study

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The Ludwigshafen atrial fibrillation (AF) study is a prospective single center observational study on an intention to cardiovert basis, including 1269 consecutive unselected patients (pts) with AF. Aim of this substudy was to evaluate the embolic event rate in pts with AF and ineffective anticoagulation (IA), in whom electrical cardioversion (CV) was intended . IA was defined, if warfarin was given, however INR was < 2, or if no anticoagulation was performed. Reasons for performing CV in pts with IA were AF of < 48 h, hemodynamic instable AF, or contraindication for anticoagulation. After cardioversion an overlap of warfarin therapy and intravenous heparin was given to maintain adequate anticoagulation after CV in pts without contraindications for anticoagulation.
**Results:** In 193 pts (15%) anticoagulation therapy was ineffective at the time of the intended CV. Transesophageal echocardiography (TEE) was performed in 126 pts, in the remaining 67 pts transthoracic echo was performed. A thrombus was found in 10 pts (7.9%) of the 126 pts with AF and ineffective anticoagulation. In 53 of the 126 pts (42%) TEE revealed spontaneous echo contrast. The grade of spontaneous echo contrast was mild in 74%, moderate in 19% and severe in 9%. In 150 of the 196 pts (78%) CV was performed, in the remaining 43 pts no CV was performed. In 2 of 150 pts (1.3%) with AF and IA a transient ischemic attack occurred in the first 4 weeks after CV. In both pts TEE was performed before CV, none of the pts had evidence of left atrial thrombus. In none of the 43 pts without CV a thromboembolic complication occurred. In comparison the rate of thromboembolic complications in the first 4 weeks after CV was 0.8 % (9/1076 pts) in pts with AF and effective anticoagulation at least 3 weeks prior to CV.
**Conclusion:** 1) In our AF outpatient clinic 15% of the pts with AF had ineffective anticoagulation prior to CV. 2) The rate of embolic events in the first 4 weeks after the intended CV was 1.3 in pts with ineffective anticoagulation compared to 0.8 in pts with effective anticoagulation.

POSTER SESSION

# 1067 Implantable Cardioverter Defibrillator Therapy: Clinical Observations

Sunday, March 17, 2002, 3:00 p.m.-5:00 p.m.
Georgia World Congress Center, Hall G
Presentation Hour: 4:00 p.m.-5:00 p.m.

## 1067-107 Changes in R-R Intervals During Ventricular Tachyarrhythmia Storms in Patients With Implantable Cardioverter-Defibrillator

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BACKGROUND: Ventricular tachyarrhythmia (VT/VF) storms, defined as greater than or equal to 3 episodes within 24 hours, have been reported in patients with implantable cardioverter-defibrillator (ICD). The study objective was to determine whether predisposition to VT/VF storms could be assessed from changes in episode related cardiac cycle lengths. METHODS: ICD patients (n=220) with coronary artery disease were followed for 6.9±3.6 months post-implant. Stored electrograms were retrospectively reviewed and all true VT/VF episodes, each of which was successfully terminated, were identified. Two types of changes in mean R-R interval (R-R) were calculated: (1) Delta-RR1, {[(mean R-R immediately prior to an episode)-(baseline mean R-R)]/(baseline mean R-R)}*100%, and (2) Delta-RR2, {[(mean R-R immediately after an episode)-(mean R-R immediately prior to an episode)]/(mean R-R immediately prior to an episode)}*100%. Baseline mean R-R was obtained at office visit and the mean R-Rs immediately prior to and immediately after an episode were obtained from ICD electrograms (excluding premature contraction). RESULTS: There were a total of 629 episodes in 72 patients. Forty-one patients had all discrete episodes (total 91 episodes, group 1) without storms. Thirty-one patients experienced at least one storm and had a total of 538 episodes (group 2). Of 538 episodes in group 2, 405 episodes (75%, group 2a) occurred in 57 storms and the remaining 133 episodes were discrete (25%, group 2b). Each VT/VF storm consisted of 7.1±5.7 episodes (median = 5). The Delta-RR1 was -10.7±23.6% for group 1 and -27.3±15.4%